CLAIMS

[0066] What is claimed is:

1. A method of creating an output variable print document based on an input variable print document having a visual appearance corresponding to a plurality of elements, each element being characterized at least by a z-axis value and a geometry, the method comprising:

creating at least one composite element in said output document to represent at least two elements in said input document if creating said composite element is desirable; and

altering z-axis values of said at least two elements if creating said composite element is not desirable and if said at least two elements do not overlap.

2. The method of claim 1, wherein said plurality of elements are characterized by a coverage area and wherein determining if creating said composite element is desirable includes calculating a coverage area of said composite element.

3. The method of claim 1, wherein said determining if creating said composite element is desirable includes comparing said coverage area of said composite element to the sum of said coverage areas of said at least two elements in said input document.

4. The method of claim 1, wherein said plurality of elements are characterized by a coverage area and wherein said determining if creating said composite element is desirable includes determining whether creating said composite element in said output document results in exceeding a predetermined maximum total coverage area.

5. The method of claim 1, wherein said plurality of elements are characterized by a coverage area and wherein said determining if creating said composite element is desirable includes determining whether a coverage area of said composite element divided by a sum of coverage areas of said at least two elements is less than a predetermined coverage area reduction parameter.

6. The method of claim 1, wherein said plurality of elements are characterized by a type and wherein said determining if creating said composite element is desirable includes determining whether types of said at least two elements are compatible.

7. The method of claim 6, wherein said type is selected from the set consisting of fixed, reusable and unique.

8. The method of claim 1, wherein said plurality of elements are characterized by coverage areas corresponding to polygons enclosing said elements, respectively.

9. The method of claim 8, wherein said altering z-axis values of said at least two elements if creating said composite element is not desirable and if said at least two elements do not overlap comprises determining whether polygons enclosing said at least two elements overlap.

10. The method of claim 8, wherein said polygons are rectangles.

11. The method of claim 9, wherein said polygons are rectangles.

12. The method of claim 1, wherein said plurality of elements are characterized by coverage areas corresponding to bitmap masks of said elements.

13. The method of claim 12, wherein said altering z-axis values of said at least two elements if creating said composite element is not desirable and if said at least two elements do not overlap comprises determining whether said coverage areas corresponding to bitmap masks of said at least two elements overlap.

14. The method of claim 1, wherein said output variable print document has a format selected from the set consisting of VPS, PPML and ANSI CGATS 2.0 (PPML/VDX).

15. The method of claim 1, wherein said input variable print document has a format selected from the set consisting of VPS, PPML and ANSI CGATS 2.0 (PPML/VDX).

16. The method of claim 15, wherein said output variable print document has a format selected from the set consisting of VPS, PPML and ANSI CGATS 2.0 (PPML/VDX).

17. Apparatus comprising:

means for receiving an input variable print document having a visual appearance corresponding to a plurality of elements, each element being characterized at least by a geometry and a z-axis value; and

a processor to create an output variable print document by creating at least one composite element in said output document to replace at least two elements in said input variable print document if creating said composite element is desirable, and otherwise altering z-axis values of said at least two elements if said at least two elements do not overlap.

18. A program storage device having instructions readable by a machine that when executed by the machine results in:

receiving an input variable print document having a visual appearance corresponding to a plurality of elements, each element being characterized at least by a geometry and a z-axis value; and

creating an output variable print document, wherein creating said output variable print document comprises creating at least one composite element in said output document to replace at least two elements in said input variable print document if creating said composite element is desirable, and otherwise altering z-axis values of said at least two elements if said at least two elements do not overlap.